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A digital simulation of transient oxygen transport in capillary-tissue systems (cerebral grey matter), Reneau, Daniel D., Jr., Duane F. Bruley, and Melvin H. Knisely, **AIChE Journal, 15,** No 6., p. 916 (November, 1969).

Key Words: A. Simulation-8, Mathematical Model-10, Transports-8, 9, Oxygen-9, Blood-5, Capillaries-9, Mass Transfer-8, 9, Digital Computer-10, Nerve Cells-9, Brain-9.

Abstract: The purpose of this work was to obtain a better understanding of transient oxygen release, diffusion, and consumption in the capillaries and tissue of cerebral grey matter by describing the different aspects of the convection-diffusion system in a mathematical model. Insight into the problem can be gained by the formulation and solution of a detailed mathematical model.

An equation of state for methane in the gas and liquid phases, Vennix, A. J., and Riki Kobayashi, **AIChE Journal, 15,** No. 6, p. 926 (November, 1969).

Key Words: A. Equation of State-8, Methane-9, P-V-T Relationships-8, Isochores-10, Gas Phase-0, Liquid Phase-0.

Abstract: An equation of state was developed which represented experimental methane PVT data over the temperature range of 130° to 625°K. for pressures to 10,000 lb./sq.in.abs. and densities to 0.36 g./cc. The equation was developed by first analyzing isochoric data from the saturation point to the high temperature or pressure limit. An expression was then obtained, reflecting qualitative behavior of the isochores, that reproduced experimental data along each isochore with an average pressure error of 0.02 and a maximum error of 0.08%.

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